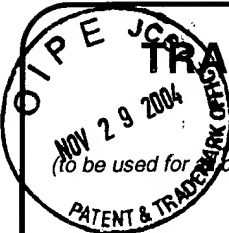
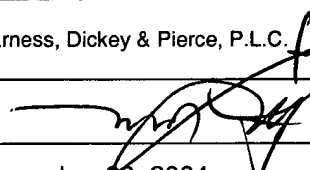


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IPW

	Application Number	09/207,748
	Filing Date	December 8, 1998
	Inventor(s)	Qi Bi et al.
	Group Art Unit	2666
	Examiner Name	Phuc H. Tran
	Attorney Docket Number	29250-000667/US

ENCLOSURES (check all that apply)				
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Letter to the Official Draftsperson and _____ Sheets of Formal Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims) <input checked="" type="checkbox"/> Appeal Communication to Group (Notice of Appeal, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):		
<table border="1"> <tr> <td>Remarks</td> <td></td> </tr> </table>			Remarks	
Remarks				

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm or Individual name	Harness, Dickey & Pierce, P.L.C.	Attorney Name Gary D. Yacura
		Reg. No. 35,416
Signature	 45,274	
Date	November 29, 2004	



PATENT

Atty. Docket No.: 29250-000667/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 09/207,748
Filing Date: December 8, 1998
Applicant: Qi BI et al.
Group Art Unit: 2666
Examiner: P. H. Tran
Title: VARIABLE RATE FORWARD POWER CONTROL FOR
MULTICHANNEL APPLICATIONS
Conf No: 7216

APPEAL BRIEF

U.S. Patent and Trademark Office
220 20th Street S.
Customer Window Mail Stop Appeal Brief-Patents
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

November 29, 2004 (Monday)

Dear Sir:

Appellants submit herewith their Brief on Appeal as required by 37 C.F.R. 41.37.

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BRIEF ON BEHALF OF APPELLANTS

In support of the Notice of Appeal filed September 29, 2004, appealing the Examiner's final rejection mailed June 29, 2004 of each of pending claims 1-4 and 9-24 of the present application which appear in the attached claims appendix, Appellants hereby provide the following remarks.

(1) **REAL PARTY IN INTEREST:**

The real party in interest is Lucent Technologies, Inc, as evidenced by the assignment recorded at reel 9735, frame 0591.

(2) **RELATED APPEALS AND INTERFERENCES:**

No related appeals or interferences are known.

(3) **STATUS OF THE CLAIMS:**

Pending claims 1-4 and 9-24 are the appealed claims, and stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Hamalainen et al. (U.S. Patent No. 5,802,465) in view of Appellant's admitted prior art in the background of the invention (hereafter "Appellant's APA"). Claims 5-8 have been previously canceled in prosecution.

(4) **STATUS OF ANY AMENDMENT FILED SUBSEQUENT TO FINAL REJECTION:**

An after final amendment was filed November 24, 2004 to amend claims 10 and 20 for the single purpose of correcting punctuation errors. Appellants presume that the Examiner will enter these amendments to reduce the number of issues on appeal. The claims appendix, however, reflects the status of the claims before amendment.

(5) **SUMMARY OF CLAIMED SUBJECT MATTER:**

FIG. 4 illustrates a situation where a mobile 12 is in a soft hand off condition receiving signals from two base stations 10 and 50. In this situation, mobile 12 is

receiving a voice channel and a data channel from base station 10, but only a voice channel from base station 50. This situation may arise in a soft handoff where base station 50 has insufficient resources available to provide both a voice channel and a data channel for mobile 12¹. This is known as an asymmetrical or a “reduced active set” situation, where the same power control information cannot be used to control both the voice and data forward channels. The voice and data may be subjected to different fluctuations and the power control information derived from monitoring the voice channel cannot be applied to data channel and vice versa.²

The exemplary embodiments of the present invention address the above problem by providing separate power control commands or information for the forward voice and forward data channels without using additional bandwidth or demanding additional pilot power provided from the mobile to the base station.³ Referring to FIG. 5, the pilot channel transmitted by mobile 12 to base stations 10 and 50 may be divided into segments or power control groups 60, 62, 64, and 66. Corresponding portions or power control sub-channels 22 of each segment may be used to transmit power control information or commands.⁴ In an example, portions 68 and 72 may be used to provide power control commands for the forward voice channel, and portions 70 and 74 may be used to provide power control for the forward data channel.⁵ As a result, separate power control may be provided for the forward voice and data channels without degrading the pilot signal provided by the mobile 12.⁶

Referring to FIG. 6, power control portions 80, 82 and 84 for forward voice channel power control and power control portion 86 for forward data channel power control may be repeated until the mobile receives new instructions from the base station or until the voice or data channel is dropped.⁷ In another example, a channel that has a high priority for power control may provide more power control transmissions or

¹ Appellants' specification, paragraph bridging pages 2 and 3.

² Appellants' specification, page 3, lines 2-6.

³ Appellants' specification, page 3, lines 9-13.

⁴ Appellants' specification, page 4, lines 19-20.

⁵ Appellants' specification, page 4, lines 28-30.

⁶ Appellants' specification, page 4, line 30 to page 5, line 1.

⁷ Appellants' specification, page 5, lines 5-10.

bandwidth than a channel with lower priority, as shown in the table of FIG. 7. In another example, when more than one channel is controlled, the power control information for each channel may be transmitted in an interleaving fashion, using the power control portion of the pilot channel segments.⁸ It is also possible to provide power control for more than two forward channels, for example power control made provided for a voice channel, data channel and video channel, or for a voice channel on more than one data channel.⁹

(6) GROUND S OF REJECTION TO BE REVIEWED ON APPEAL:

Claims 1-4, 9-11, 14, 15, 17-19, 21-22 and 24 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Appel (USP 6,223,056), hereafter "Appel" in view of Kim et al. (USP 6,614,771), hereafter "Kim".

Claims 12-13, 16, 20 and 23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Appel in view of Ghosh (USP 5,991,285).

(7) ARGUMENT:

a. Claim 1 is not rendered obvious by Appel in view of Kim.

Appellants respectfully submit that neither Appel or Kim, either singularly or in combination, teach or suggest a method for communicating power control information for at least two communication channels, comprising, at least:

transmitting power control information for a forward voice channel to be transmitted from a base station to a mobile station in a portion of a first segment of a reversed pilot channel transmitted from the mobile station to the base station; and

transmitting power control information for a forward data channel in a corresponding portion of a second segment of the reverse pilot channel;

as recited in claim 1.

Initially, Appellants submit that Appel is not directed to transmitting power control information for either a forward voice or data channel, but is only generally directed to

⁸ Appellants' specification, page 5, lines 22-24.

⁹ Appellants' specification, page 5, lines 20-22.

adjusting DC prime power level in a power amplifier at a base station based on control signals received from mobile station in a reverse channel. Appel is directed to a wireless telephone system 100 having variable power transmitter amplifiers that may reduce the DC prime power consumed by one or more of the base transceiver stations 101-103 whenever a base transceiver station determines that the power level of its RF output signal may be maintained at a lower DC prime power level in the power amplifier.¹⁰

Appel generically describes voice, data and/or control signals transmitted from a base station transceiver to a mobile unit collectively as "forward channel signals", and voice, data and/or control signals that are transmitted from a mobile unit to a base station transceiver collectively as "reverse channel signals."¹¹ The control signal in Appel sent from mobile to base transceiver station is to increase the RF output power level of the base transceiver station if the signal quality (embodied as a received signal strength indicator (RSSI)) falls below a minimum acceptable threshold.¹²

Referring to FIG. 2, Appel uses a control processor (CP) 215 of a ground unit 211 to control power in a variable power transmitter amplifier 203 in a tower top system 201 of the BTS 101. This is the focus of Appel. Under the control of the control processor 215, the DSPs 212-214 receive voice, data and/or control signals from a low-noise receiver amplifier 202 and send voice, data, and/or control signals to the variable power transmitter amplifier 203.¹³ DSPs 212-214 are capable of measuring the power level of the received reverse channel signals transmitted by the mobile units.¹⁴ The digital signal processors 212-214 can also detect and extract, from the reverse channel signals, one or more power control signals sent back from the mobile units to the base transceiver station 101 in order to control the RF output power level of the variable power transmitter amplifier 203 via control processor 215.¹⁵

However, Appel is silent as to transmitting power control information for a forward voice channel in a portion of a first segment of a reverse channel and

¹⁰ Appel, col. 5, lines 49-56.

¹¹ Appel, col. 5, lines 57-64.

¹² Appel, col. 5, lines 39-43; col. 6, lines 38-42.

¹³ Appel, col. 6, lines 21-27.

¹⁴ Appel, col. 6, lines 28-32.

¹⁵ Appel, col. 6, lines 32-38.

transmitting power control information for a forward data channel in a portion of a second segment of a reverse channel. All that is described in Appel is the ability to extract power control signals from reverse channel signals (defined as any of voice, data or control signals) sent from the mobile units "in order to control the RF output power level of the variable power transmitter amplifier 203". Appel does not even begin to address providing separate power control commands for different forward voice and data channels in specified segments of a reverse channel, much less specified segments that are part of a reverse pilot channel.

Yet, the Examiner relies on the abstract of Kim to teach the above features of claim 1. The Examiner alleges that Kim teaches that "a plurality of terminals have a random access to the reverse common channel system in CDMA"¹⁶ Appellants are at a loss as to what the alleged teaching in Kim has to do with transmitting power control information for a forward voice channel in a portion of a first segment of a reverse channel and transmitting power control information for a forward data channel in a portion of a second segment of a reverse channel, as recited in claim 1. Kim thus does not even appear remotely relevant to these recited features, as emblematic from the abstract of Kim, reprinted below:

An apparatus for making a plurality of terminals have a random access to the reverse common channel system in CDMA, comprises code synchronization detection information broadcast means provided in the base station for broadcasting the state information of a channel card in real time for the terminals to recognize the code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of the preambles transmitted from the terminals through the reverse common channel, and data transmission determination means provided in the terminals for making the terminals to have attempted data transmission in the same time slot with the data of the code synchronization detection continuously transmit data and the other terminals stop data transmission.

At best, Kim is directed to an apparatus having terminals which recognize a code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of preambles transmitted from the

¹⁶ June 29, 2004 Final Office Action, paragraph bridging pages 2-3.

terminals through the reverse common channel. Kim does not disclose or suggest transmitting power control information for a forward voice channel or a forward data channel. As such, Kim cannot be interpreted, or even reasonably be understood, as teaching transmitting power control information for a forward voice channel (or a forward data channel) in given portions of a corresponding first and second segment of a reverse pilot channel.

Accordingly, the Appel/Kim combination is insufficient in rendering independent claim 1 as obvious to one of ordinary skill in the art. Accordingly, Appellants submit that the combination of Appel and Kim fail to teach each and every feature as recited in independent claim 1. Withdrawal of the rejection is thus kindly requested.

b. Claims 9-13 and 18-20 are not rendered obvious by Appel in view of Kim or Appel in view of Ghosh.

Appellants respectfully submit neither Appel, Kim nor Ghosh, either singularly or in combination, teach or suggest a method for communicating power control information for at least two communication channels, comprising, at least:

transmitting power control information in a portion of a first segment of a reverse pilot channel ... for a first forward channel ... the first segment being one of a plurality of repeating segments; and/or

transmitting power control information in a corresponding portion of a second segment of the reverse pilot channel ... for a second forward channel ... the second segment being one of the plurality of repeating segments;

as recited in claims 10 and 18.

Appel is generally directed to transmitting control signals in a reverse channel signal to control RF output power level of a variable power transmitter amplifier. Kim is directed to terminals which recognize a code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of preambles transmitted from the terminals through the reverse common channel.¹⁷ Neither reference thus teaches transmitting power control

¹⁷ Kim et al., abstract.

information in repeating first and second segments of a reverse pilot channel for first and second forward channels.

Ghosh has been applied for the teaching of various channel types, is thus limited to its teachings of various channel types in a CDMA system, and does not cure the deficiencies noted above in Appel and/or Kim. Specifically, Ghosh fails to teach, at least: “transmitting power control information in a portion of the first segment of a reverse pilot channel” and/or “transmitting power control information in a corresponding portion of the second segment of a reverse pilot channel, as recited in claims 10 and 18, and/or where the first and second segments carrying power control information for the first and second forward channels are repeating segments, as recited in claims 9, 10 and 18.

Accordingly, the Appel/Kim or Appel/Ghosh combination is insufficient in rendering independent claims 10 or 18 (or dependent claim 9) as obvious to one of ordinary skill in the art. Accordingly, Appellants submit that the combination of Appel and Kim fail to teach each and every feature as recited in claims 9, 10 and 18. Claims 11-13, 19 and 20, by virtue of their dependency off of claims 10 or 18, are also allowable for the reasons above.

c. Claims 2, 14 and 21 are not rendered obvious by Appel in view of Kim.

Claims 2, 14 and 21 recite, inter alia: “alternating between the transmission of power control information for the forward voice channel and the transmission of power control information for the forward data channel”. Appellants submit that these claims are separately patentable over Appel and/or Kim for the reasons below.

The Examiner alleges that “communications between base station and mobile stations with many channels”¹⁸ may be interpreted as a teaching of alternating transmission of power control information between forward voice and forward data channels. Appellants submit that this is insufficient evidence of a teaching in Appel for the above feature, as required by 35 USC §102. Accordingly, claims 2, 14 and 21 are separately patentable at least for the reason that the Examiner has failed to identify the above feature in any of Appel, Kim or Ghosh.

d. Claims 3, 15, 16, 22 and 23 are not rendered obvious by Appel in view of Kim or Appel in view of Ghosh.

Claims 3, 15 and 22 recite, inter alia:

transmitting power control information for a third forward channel within a corresponding portion of a third segment of the reverse pilot channel, the third segment being one of the plurality of repeating segments, wherein the third forward channel is one of a forward data channel, forward voice channel and forward video channel.

Appellants submit that these claims (and claims 16 and 23 dependent thereon) are separately patentable over Appel, alone or in combination with Kim and/or Ghosh for the reasons below.

Appel is silent as to any teaching of transmitting power control information for certain forward channels in certain segments of a reverse pilot channel. The Examiner

¹⁸ June 29, 2004 final office action, page 3, lines 4-7.

relies on the teachings of Kim for such a teaching. Kim is directed to terminals which recognize a code synchronization detection when the code synchronization of a certain data is acquired through performing the code synchronization of preambles transmitted from the terminals through the reverse common channel. Kim thus is not remotely relevant to describing transmitting power control information for a third forward channel in a third segment that is a repeating segment.

Ghosh has been applied for the teaching of various channel types, is thus limited to its teachings of various channel types in a CDMA system, but does not cure the deficiencies noted above in Appel and/or Kim, at least for the reason that Ghosh does not teach or suggest transmitting power control information for a third forward channel within a corresponding portion of a third segment of the reverse pilot channel, the third segment being one of the plurality of repeating segments, as recited in claim 3, 15 and/or 22.

Accordingly, claims 3,15,16, 22 and 23 are separately patentable at least for the reason that the Examiner has failed to identify the above feature in any of Appel, Kim or Ghosh.

e. Claims 4, 17 and 24 are not rendered obvious by Appel in view of Kim.

Claims 4, 17 and 24 recite, inter alia: “wherein power control information for the first forward channel is transmitted at least two or more times for each transmission of power control information for the second channel”. Appellants submit that these claims are separately patentable over Appel, alone or in combination with Kim.

The Examiner relies improperly on an inherency argument for alleging that the above feature is taught by Appel.¹⁹ Appellants do not waste the panel’s time regurgitating the well known and numerous case law precedent rejecting the use of inherency arguments in obvious-type rejections under 35 USC §103.

¹⁹ June 29, 2004 final office action, page 3, lines 8-13.

Appellants submit that the Examiner has not provided the requisite teaching or suggestion, in Appel, for the above feature, as required by 35 USC §103. Accordingly, claims 4, 17 and 24 are separately patentable at least for the reason that the Examiner has failed to identify the above feature in any of Appel, Kim or Ghosh.

(8) CONCLUSION

For all the reasons set forth above, the present invention as recited in Appellant's pending claims 1-4 and 9-24 are not anticipated, nor rendered obvious to one skilled in the art as asserted by the Examiner. Accordingly, it is respectfully submitted that the claimed invention should properly be patentable over the cited art. It is therefore respectfully requested that this Appeal be granted by the panel and that the Examiner be reversed.

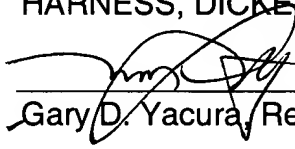
In the event that any matters remain at issue in the application, the Examiner is invited to contact Matthew J. Lattig at (703) 668-8026 in the Northern Virginia area, for the purpose of a telephonic interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By

 45,274
f Gary D. Yacura, Reg. No. 35,416

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Attached: (9) Appendix: Pending claims of record

(9) CLAIMS APPENDIX:

1. A method for communicating power control information for at least two communication channels, comprising:
 - transmitting power control information for a forward voice channel to be transmitted from a base station to a mobile station in a portion of a first segment of a reverse pilot channel transmitted from the mobile station to the base station; and
 - transmitting power control information for a forward data channel in a corresponding portion of a second segment of the reverse pilot channel.
2. The method of claim 1, further comprising alternating between the transmission of power control information for the forward voice channel and the transmission of power control information for the forward data channel.
3. The method of claim 1, further comprising transmitting power control information for a third forward channel within a corresponding portion of a third segment of the reverse pilot channel, the third segment being one of the plurality of repeating segments, wherein the third forward channel is one of a forward data channel, forward voice channel and forward video channel .
4. The method of claim 1, wherein power control information for the first forward channel is transmitted at least two or more times for each transmission of power control information for the second channel.
9. The method of claim 1, wherein the first segment is one of a plurality of repeating segments and the second segment is one of the plurality of repeating segments.
10. A method for communicating power control information for at least two communication channels, comprising:

transmitting power control information in a portion of a first segment of a reverse pilot channel transmitted from a mobile station to a base station, wherein the power control information is for a first forward channel that is to be transmitted from the base station to the mobile station, the first segment being one of a plurality of repeating segments; and

transmitting power control information in a corresponding portion of a second segment of the reverse pilot channel, wherein the power control information is for a second forward channel to be transmitted from the base station to the mobile station, the second segment being one of the plurality of repeating segments

wherein the first forward channel carries different information than the second forward channel.

11. The method of claim 10, wherein the power control information for the first forward channel is different than the power control information for the second forward channel.

12. The method of claim 10, wherein the first forward channel is one of a voice channel, data channel and video channel.

13. The method of claim 10, wherein the second forward channel is one of a voice channel, data channel and video channel.

14. The method of claim 10, further comprising alternating between the transmission of power control information for the first forward channel and the transmission of power control information for the second forward channel.

15. The method of claim 10, further comprising transmitting power control information in a corresponding portion of a third segment of the reverse pilot channel, wherein the power control information is for a third forward channel that is to be transmitted from the base station to the mobile station.

16. The method of claim 15, wherein

the third segment is one of the plurality of repeating segments, and

the third forward channel is one of a forward data channel, forward voice channel and forward video channel .

17. The method of claim 10, wherein power control information for the first forward channel is transmitted at least two or more times for each transmission of power control information for the second channel.

18. A method for communicating power control information for at least two communication channels, comprising:

transmitting power control information in a portion of a first segment of a reverse pilot channel transmitted from a mobile station to a base station, wherein the power control information is for a first forward channel to be transmitted from the base station to the mobile station, the first segment being one of a plurality of repeating segments; and

transmitting power control information in a corresponding portion of a second segment of the reverse pilot channel, wherein the power control information is for a second forward channel to be transmitted from the base station to the mobile station, the second segment being one of the plurality of repeating segments.

19. The method of claim 18, wherein the power control information for the first forward channel is different than the power control information for the second forward channel.

20. The method of claim 18, wherein

the first forward channel is one of a voice channel, data channel and video channel, and

the second forward channel is different from the first forward channel and is one of a voice channel, data channel and video channel

21. The method of claim 18, further comprising alternating between the transmission of power control information for the first forward channel and the transmission of power control information for the second forward channel.
22. The method of 18, further comprising transmitting power control information in a corresponding portion of a third segment of the reverse pilot channel, wherein the power control information is for a third forward channel that is to be transmitted from the base station to the mobile station.
23. The method of claim 22, wherein
 - the third segment is one of the plurality of repeating segments, and
 - the third forward channel is one of a forward data channel, forward voice channel and forward video channel .
24. The method of claim 18, wherein power control information for the first forward channel is transmitted at least two or more times for each transmission of power control information for the second channel.